INTRODUCTION

- Parsonage-Turner Syndrome (PTS) is a rare acquired disorder that presents with abrupt onset of unilateral shoulder pain and progressive focal neurologic deficits.
- Neurologic symptoms may include motor weakness, paraesthesia, dysaesthesia, and hypaesthesia.
- The disorder is also referred to as idiopathic brachial plexopathy or neuralgic amyotrophy.
- PTS affects the neurons of the brachial plexus.
- The pathophysiology of PTS remains unclear, although it has been associated with viral infections, localized trauma (including shoulder surgery), and vaccinations given in the affected shoulder.
- PTS remains a diagnostic challenge, as its presentation is easily confused with other forms of shoulder pain and dysfunction.
- Misdiagnosis has led to numerous unnecessary treatments including surgical intervention in extreme cases.
- We present the first detailed report of an adolescent patient with PTS and focus specifically on pain management and rehabilitation.

REFERENCES


CASE REPORT

- 16 year old previously healthy female who developed PTS following a viral upper respiratory tract infection.
- A few days after the resolution of her respiratory symptoms, she developed acute left shoulder pain & tingling.
- Over the next several days, the pain intensified and expanded to include her left upper arm, forearm, and hand. She also developed significant weakness and scapular winging, leading to near-immobility of her left upper extremity.
- She underwent an extensive work-up including MRI and EMG. Her MRI revealed no cervical disk disease, and her EMG was consistent with a progressive denervation process.
- She was diagnosed with PTS with involvement of the left long thoracic nerve. She was then referred to the Pediatric Chronic Pain Clinic at Vanderbilt Children’s Hospital for treatment.
- The patient was started on an anti-neuropathic pain regimen that included pregabalin and amitriptyline. Starting doses were 25 mg po daily and 10 mg po qHS, respectively.
- She also began an aggressive physical therapy program tailored specifically for PTS.
- Blockade of the brachial plexus was initially considered to aid in analgesia for rehabilitation, but was ultimately deferred as the patient responded very favorably to non-interventional therapy.
- Over the next three months, her pregabalin and amitriptyline doses were titrated upwards to 50 mg po daily and 12.5 mg po qHS.
- At three months, the patient showed marked improvement, with a 75% reduction in objective pain scores. She was able to resume competitive sports and showed an overall improvement in her quality of life.
- At her six-month appointment, she reported no pain and complete resolution of neurologic symptoms.

DISCUSSION

- Parsonage-Turner Syndrome (PTS) is the name given to a condition involving unilateral shoulder pain and progressive neurologic deficits corresponding with a brachial plexus neuritis.
- PTS can be very difficult to diagnose, as its presentation may mimic other causes of shoulder pain, including, but not limited to rotator cuff injury, acute calcific tendonitis, adhesive capsulitis, cervical spondylosis, peripheral nerve compression, tumor, acute poliomyelitis, and amyotrophic lateral sclerosis.
- The cause of PTS remains a mystery, but it has been associated with a variety of factors, including viral illness, immunization, autoimmune disorders, recent surgery, local trauma, and heavy exercise.
- PTS is self-limiting condition, with treatment remaining largely conservative and supportive. However, difficulties in diagnosis have led to unnecessary invasive measures.
- Electromyography (EMG) is crucial to the diagnostic process. Widespread denervation is usually seen in the muscles innervated by the brachial plexus. EMG can also grade the severity of denervation and subsequent studies can be used to assess reinnervation and recovery.
- Anti-neuropathic pain medications and a tailored physical therapy regimen are the mainstays of successful treatment.
- Other reported therapeutic adjuncts include non-steroidal anti-inflammatory drugs (NSAID's), opiates, acupuncture, massage, and transcutaneous electrical nerve stimulation (TENS).
- There is currently no strong evidence supporting the administration of corticosteroids in PTS.